

Amendments to the Claims:

This listing will replace all prior versions and listings of the claims.

Listing of the Claims:

1. (Original) An isolated nucleic acid molecule comprising a polynucleotide having a nucleotide sequence at least 95% identical to a sequence selected from the group consisting of:

(a) a polynucleotide fragment of SEQ ID NO:X or a polynucleotide fragment of the cDNA sequence included in ATCC Deposit No:Z, which is hybridizable to SEQ ID NO:X;

(b) a polynucleotide encoding a polypeptide fragment of SEQ ID NO:Y or a polypeptide fragment encoded by the cDNA sequence included in ATCC Deposit No:Z, which is hybridizable to SEQ ID NO:X;

(c) a polynucleotide encoding a polypeptide domain of SEQ ID NO:Y or a polypeptide domain encoded by the cDNA sequence included in ATCC Deposit No:Z, which is hybridizable to SEQ ID NO:X;

(d) a polynucleotide encoding a polypeptide epitope of SEQ ID NO:Y or a polypeptide epitope encoded by the cDNA sequence included in ATCC Deposit No:Z, which is hybridizable to SEQ ID NO:X;

(e) a polynucleotide encoding a polypeptide of SEQ ID NO:Y or the cDNA sequence included in ATCC Deposit No:Z, which is hybridizable to SEQ ID NO:X, having biological activity;

(f) a polynucleotide which is a variant of SEQ ID NO:X;

(g) a polynucleotide which is an allelic variant of SEQ ID NO:X;

(h) a polynucleotide which encodes a species homologue of the SEQ ID NO:Y;

(i) a polynucleotide capable of hybridizing under stringent conditions to any one of the polynucleotides specified in (a)-(h), wherein said polynucleotide does not hybridize under stringent conditions to a nucleic acid molecule having a nucleotide sequence of only A residues or of only T residues.

2-10. (Canceled)

11. (Original) An isolated polypeptide comprising an amino acid sequence at least 95% identical to a sequence selected from the group consisting of:

(a) a polypeptide fragment of SEQ ID NO:Y or the encoded sequence included in ATCC Deposit No:Z;

(b) a polypeptide fragment of SEQ ID NO:Y or the encoded sequence included in ATCC Deposit No:Z, having biological activity;

(c) a polypeptide domain of SEQ ID NO:Y or the encoded sequence included in ATCC Deposit No:Z;

(d) a polypeptide epitope of SEQ ID NO:Y or the encoded sequence included in ATCC Deposit No:Z;

(e) a secreted form of SEQ ID NO:Y or the encoded sequence included in ATCC Deposit No:Z;

(f) a full length protein of SEQ ID NO:Y or the encoded sequence included in ATCC Deposit No:Z;

(g) a variant of SEQ ID NO:Y;

(h) an allelic variant of SEQ ID NO:Y; or

(i) a species homologue of the SEQ ID NO:Y.

12. (Canceled)

13. (Original) An isolated antibody that binds specifically to the isolated polypeptide of claim 11.

14. (Original) A recombinant host cell that expresses the isolated polypeptide of claim 11.

15. (Original) A method of making an isolated polypeptide comprising:

(a) culturing the recombinant host cell of claim 14 under conditions such that said polypeptide is expressed; and

(b) recovering said polypeptide.

16. (Canceled)

17. (Original) A method for preventing, treating, or ameliorating a medical condition, comprising administering to a mammalian subject a therapeutically effective amount of the polypeptide of claim 11.

18. (Original) A method of diagnosing a pathological condition or a susceptibility to a pathological condition in a subject comprising:

(a) determining the presence or absence of a mutation in the polynucleotide of claim 1; and

(b) diagnosing a pathological condition or a susceptibility to a pathological condition based on the presence or absence of said mutation.

19. (Original) A method of diagnosing a pathological condition or a susceptibility to a pathological condition in a subject comprising:

(a) determining the presence or amount of expression of the polypeptide of claim 11 in a biological sample; and

(b) diagnosing a pathological condition or a susceptibility to a pathological condition based on the presence or amount of expression of the polypeptide.

20. (Original) A method for identifying a binding partner to the polypeptide of claim 11 comprising:

(a) contacting the polypeptide of claim 11 with a binding partner; and

(b) determining whether the binding partner effects an activity of the polypeptide.

21. (Canceled)

22. (Original) A method of identifying an activity in a biological assay, wherein the method comprises:

(a) expressing SEQ ID NO:X in a cell;

(b) isolating the supernatant;

- (c) detecting an activity in a biological assay; and
- (d) identifying the protein in the supernatant having the activity.

23. (Canceled)

24. (Previously presented) A method for preventing, treating, or ameliorating a medical condition, comprising administering to a mammalian subject a therapeutically effective amount of the polynucleotide of claim 1.

25. (New) An isolated nucleic acid molecule comprising a polynucleotide selected from the group consisting of:

- (a) a polynucleotide encoding amino acid residues 1 to 88 of SEQ ID NO:83;
- (b) a polynucleotide encoding amino acid residues 2 to 88 of SEQ ID NO:83; and
- (c) a polynucleotide encoding amino acid residues 22 to 88 of SEQ ID NO:83.

26. (New) The isolated polynucleotide of claim 25, wherein said polynucleotide is (a).

27. (New) The isolated polynucleotide of claim 25, wherein said polynucleotide is (b).

28. (New) The isolated polynucleotide of claim 25, wherein said polynucleotide is (c).

29. (New) An isolated nucleic acid molecule comprising a polynucleotide selected from the group consisting of:

- (a) a polynucleotide encoding the amino acid sequence of the full-length polypeptide, which amino acid sequence is encoded by the HMADS41 cDNA clone contained in ATCC Deposit No.209563;

(b) a polynucleotide encoding the amino acid sequence of the full-length polypeptide, excluding the N-terminal methionine residue, which amino acid sequence is encoded by the HMADS41 cDNA clone contained in ATCC Deposit No.209563; and

(c) a polynucleotide encoding the amino acid sequence of the secreted polypeptide, which amino acid sequence is encoded by the HMADS41 cDNA clone contained in ATCC Deposit No.209563.

30. (New) The isolated polynucleotide of claim 29, wherein said polynucleotide is (a).

31. (New) The isolated polynucleotide of claim 29, wherein said polynucleotide is (b).

32. (New) The isolated polynucleotide of claim 29, wherein said polynucleotide is (c).

33. (New) An isolated nucleic acid molecule comprising a first polynucleotide 95% or more identical to a second polynucleotide selected from the group consisting of:

- (a) a polynucleotide encoding amino acid residues 1 to 88 of SEQ ID NO:83;
- (b) a polynucleotide encoding amino acid residues 2 to 88 of SEQ ID NO:83; and
- (c) a polynucleotide encoding amino acid residues 22 to 88 of SEQ ID NO:83.

34. (New) The isolated nucleic acid molecule of claim 33 which further comprises a first polynucleotide 95% or more identical to a second polynucleotide encoding amino acid residues 1 to 88 of SEQ ID NO:83.

35. (New) The isolated nucleic acid molecule of claim 33 which further comprises a first polynucleotide 95% or more identical to a second polynucleotide encoding amino acid residues 2 to 88 of SEQ ID NO:83.

36. (New) The isolated nucleic acid molecule of claim 33 which further comprises a first polynucleotide 95% or more identical to a second polynucleotide encoding amino acid residues 22 to 88 of SEQ ID NO:83.

37. (New) An isolated nucleic acid molecule comprising a first polynucleotide 95% or more identical to a second polynucleotide selected from the group consisting of:

(a) a polynucleotide encoding the amino acid sequence of the full-length polypeptide, which amino acid sequence is encoded by the HMADS41 cDNA contained in ATCC Deposit No. 209563; and

(b) a polynucleotide encoding the amino acid sequence of the secreted polypeptide, which amino acid sequence is encoded by the HMADS41 cDNA contained in ATCC Deposit No. 209563.

38. (New) The isolated nucleic acid molecule of claim 37 which further comprises a first polynucleotide 95% or more identical to a second polynucleotide encoding the amino acid sequence of the full-length polypeptide, which amino acid sequence is encoded by the HMADS41 cDNA contained in ATCC Deposit No. 209563.

39. (New) The isolated nucleic acid molecule of claim 37 which further comprises a first polynucleotide 95% or more identical to a second polynucleotide encoding the amino acid sequence of the secreted polypeptide, which amino acid sequence is encoded by the HMADS41 cDNA contained in ATCC Deposit No. 209563.

40. (New) An isolated nucleic acid molecule comprising at least 50 contiguous nucleotides of SEQ ID NO:38.

41. (New) The isolated nucleic acid molecule of claim 40, wherein said nucleic acid molecule comprises at least 50 contiguous nucleotides of the complementary strand of SEQ ID NO:38.

42. (New) An isolated nucleic acid molecule comprising at least 50 contiguous nucleotides of the HMADS41 cDNA contained in ATCC Deposit No. 209563.

43. (New) The isolated nucleic acid molecule of claim 42, wherein said nucleic acid molecule comprises at least 50 contiguous nucleotides of the complementary strand of the HMADS41 cDNA contained in ATCC Deposit No. 209563.

44. (New) The isolated nucleic acid molecule of claim 25 wherein the polynucleotide further comprises a heterologous polynucleotide which encodes a polypeptide.

45. (New) A recombinant vector comprising the isolated nucleic acid molecule of claim 25.

46. (New) The recombinant vector of claim 45 wherein the nucleic acid molecule is operably associated with a heterologous regulatory sequence that controls gene expression.

47. (New) A recombinant host cell comprising the recombinant vector of claim 45.

48. (New) The isolated nucleic acid molecule of claim 29 wherein the polynucleotide further comprises a heterologous polynucleotide which encodes a polypeptide.

49. (New) A recombinant vector comprising the isolated nucleic acid molecule of claim 29.

50. (New) The recombinant vector of claim 49 wherein the nucleic acid molecule is operably associated with a heterologous regulatory sequence that controls gene expression.

51. (New) A recombinant host cell comprising the recombinant vector of claim
49.